

APPENDIX E

FISH, WILDLIFE, AND VEGETATION RESOURCES INVENTORY

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**Fish, Wildlife and Vegetation Resources Inventory
for
Proposed Highwood Generating Station**

For:

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CONTENTS

1.0	INTRODUCTION	1 - 1
1.1.	PURPOSE AND TIME FRAME.....	1 - 1
1.2	ACKNOWLEDGEMENTS.....	1 - 3
2.0	METHODS	2 - 1
2.1	HABITATS.....	2 - 1
2.2	POTENTIAL/KNOWN SPECIES LISTS.....	2 - 1
2.3	ENDANGERED, THREATENED OR SPECIES OF CONCERN	2 - 2
2.4	CONTACTS/LITERATURE REVIEW	2 - 2
3.0	RESULTS AND DISCUSSION	3 - 1
3.1	HABITATS.....	3 - 1
3.1.1	Salem Plant Site	3 - 1
3.1.2	Great Falls Industrial Park Plant Site.....	3 - 2
3.1.3	Proposed Railroad Spur	3 - 2
3.1.4	Transmission Line 1.....	3 - 3
3.1.5	Transmission Line 2 and Switchyard.....	3 - 7
3.1.6	Fresh and Waste Water Pipeline Corridor	3 - 7
3.1.7	Raw Water Pipeline	3 - 7
3.1.8	Jurisdictional Wetlands.....	3 - 9
3.2	POTENTIAL/KNOWN SPECIES LISTS.....	3 - 9
3.3	ENDANGERED, THREATENED OR SPECIES OF CONCERN	3 - 10
3.3.1	Endangered or Threatened Species.....	3 - 10
3.3.2	Plant Species of Concern	3 - 11
3.3.3	Animal Species of Concern	3 - 12
4.0	LITERATURE CITED	4 - 1

TABLES

2-1	Montana species of concern recorded within 10 miles of Great Falls, Montana	2 - 3
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FIGURES

1-1	Highwood Power Plant proposed transmission additions overview map	1 - 2
3-1	Proposed Salem Plant Site, Highwood Generating Station	3 - 1

3-2	Representative photo of Transmission Line 2 habitats near the Salem plant site.....	3 - 4
3-3	Looking southeast towards transmission line crossing of incised drainage	3 - 4
3-4	Representative view of Missouri River and associated upland habitats	3 - 5
3-5	Grassland habitat near existing Great Falls substation.....	3 - 5
3-6	Looking west along abandoned railroad grade along fresh and waste water pipeline corridor	3 - 8
3-7	Looking west at proposed raw water pipeline route through cultivated fields	3 - 8

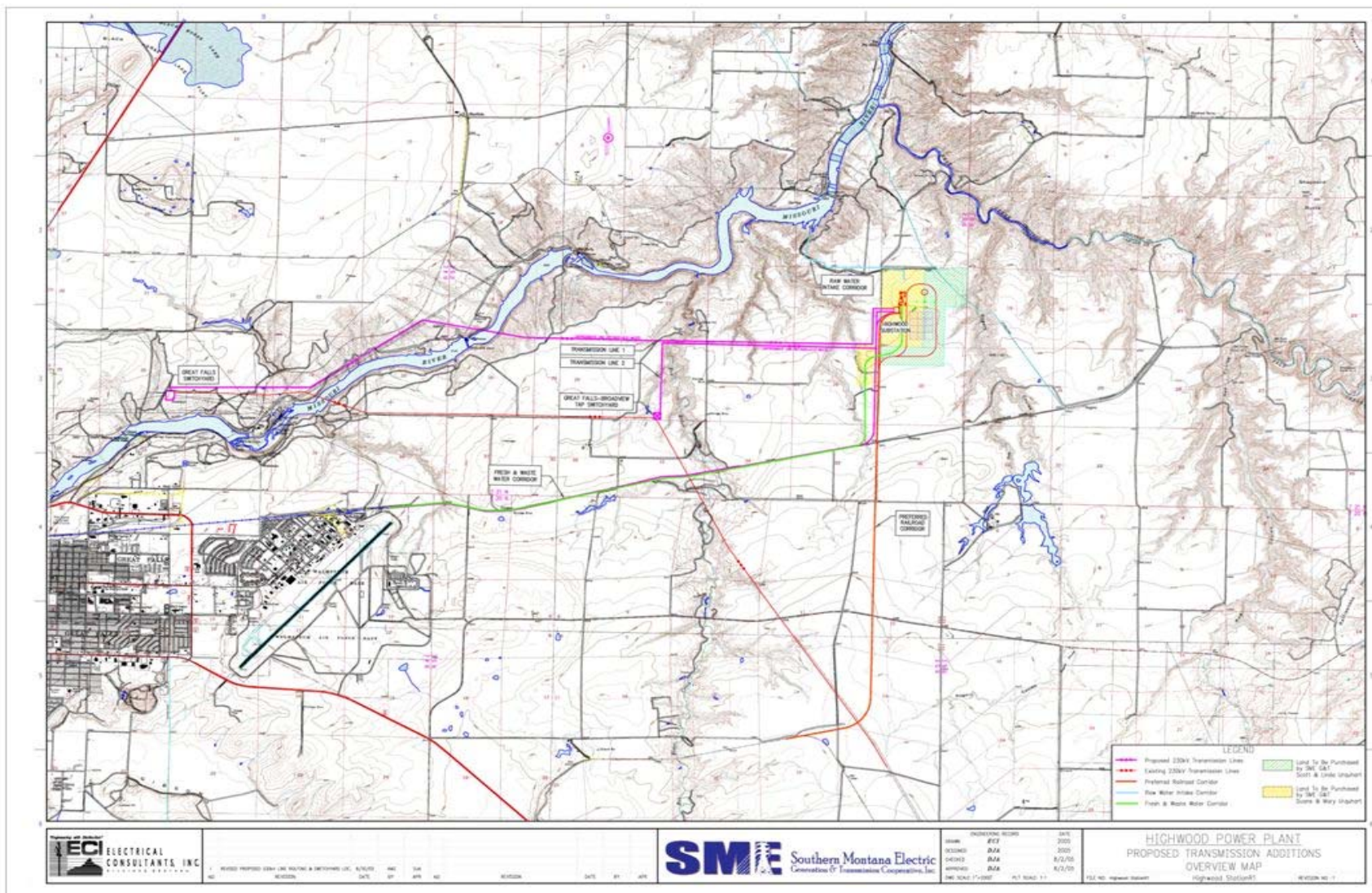
1.0 INTRODUCTION

1.1 PURPOSE AND TIME FRAME

Southern Montana Electric Generation and Transmission Cooperative, Inc. (SME) has proposed to construct and operate a 250 megawatt (MW) coal-fired power plant called the Highwood Generating Station (HGS) near the city of Great Falls in Cascade County, Montana. SME has identified two potential locations for the power plant: the preferred Salem site (Sections 24 and 25, T21N R5E) or the alternative Great Falls Industrial Park site (Section 30, T21N R4E). Development at either site would affect about 320 acres for the boilers, turbine-generator, pollution control equipment, solid waste storage facilities and associated infrastructure.

Development of the Salem site, which is SME's preferred location for the HGS, would include a raw water collection site and pump house located about 0.4 mile above Morony Dam on the Missouri River; a pipeline from the pump house about 9000 feet (1.6 miles) to the HGS; a 7.4-mile long fresh and waste water pipeline following an abandoned railroad grade from the HGS to Great Falls; a 230kV electrical interconnection line (for the purposes of this report, this line is referred to as "Transmission Line 1") from the HGS about 9.2 miles west to NorthWestern Energy's (NWE) existing Great Falls substation, crossing the Missouri River about 0.25 mile below Cochrane Dam; a second 230kV electrical interconnection line (for the purposes of this report, this line is referred to as "Transmission Line 2") about 4.1 miles southwest to a new switchyard in order to connect with the existing NWE Broadview-to-Great Falls 230kV transmission line; and a rail spur from the Salem site about 6.1 miles south to the existing Burlington Northern Santa Fe Railroad line southeast of Great Falls (Figure 1-1). More detailed descriptions of the project are included in various application documents prepared by SME.

Because the Great Falls Industrial Park site is currently considered to be an alternative to the Salem site, the specific locations and lengths of connections have not been formally



identified. If the Great Falls Industrial Park site is selected for development, the connections would likely be shorter than for the Salem site, due to the proximity of the Great Falls Industrial Park site to the established infrastructure.

An environmental impact analysis of the project is being conducted by the Rural Utility Service (RUS) of the U.S. Department of Agriculture and the Montana Department of Environmental Quality (MDEQ). The purpose of this report is to characterize the fish, wildlife and vegetation resources in the vicinity of the project for use in the environmental impact analysis. This report is based on a field reconnaissance of the project vicinity conducted on April 18-19 and July 6, 2005; a review of readily available (either published or electronic) literature sources concerning fish and wildlife resources of the vicinity; and contact with landowners and agencies.

1.2 ACKNOWLEDGEMENTS

This reconnaissance and report were funded by SME through a subcontract from Bison Engineering, Inc. (Bison) to WESTECH Environmental Services, Inc. (WESTECH). Tim Gregori oversaw the project for SME while Bison's Jeff Chaffee managed WESTECH's involvement, coordinated contacts with state and federal agencies, contacted landowners, and provided maps and other information. Kenneth Reich, Esq. of Wolf, Block, Scharr and Solis-Cohen participated by telephone in a meeting with the U.S. Fish and Wildlife Service (USFWS).

Ray Walters and Larry Johnson of Stanley Consultants provided the footprint of the project and maps of the various sites involved in the project. Dan March and Gary Ingman of Land and Water/PBS&J shared their knowledge of fish and wildlife resources of the area.

Mark Wilson and Sierra Harris of the USFWS provided guidance and information regarding federally listed or proposed endangered or threatened species that could occur in the project area. Graham Taylor and Kristi Dubois of the Montana Department of

Fish, Wildlife and Parks (MDFWP) provided information regarding wildlife of the project vicinity.

Red and Mary Urquhart, landowners, permitted access to their land and shared their knowledge of fish and wildlife resources in the area.

Patrick Farmer of WESTECH conducted the field reconnaissance and wrote this report. Dan Culwell prepared the habitat photographs for inclusion in the report.

2.0 METHODS

2.1 HABITATS

For use as a management tool, wildlife habitats are best identified by an integrated system based on existing vegetation, physical features and land use (Kerr 1986). For the purposes of this report, wildlife habitats in the vicinity of proposed sites for the HGS were identified using designations by WESTECH (1993). This typing method is based on Coenenberg *et al.* (1977) and has been used in numerous wildlife studies in Montana and other states, and has been accepted for use in NEPA documents. Habitat type and subtype codes are based on existing, rather than climax, vegetation and/or other features such as rock outcrops and ponds.

2.2 POTENTIAL/KNOWN SPECIES LISTS

Lists of fish, amphibians, reptiles, mammals and birds that could potentially occur in the region encompassing the HGS were developed from published and unpublished literature sources, including Montana Bird Distribution Committee (1996), Foresman (2001), Holton and Johnson (2003), Maxell *et al.* (2003), Werner *et al.* (2004) and the Montana Natural Heritage Program (MTNHP 2005a, b). For most species, the “region encompassing the HGS project study area” was defined to be a latilong. A latilong is a unit “...formed by successive lines of latitude and longitude, each at one degree intervals...the average dimension of a latilong is 47 miles wide by 69 miles long, representing an average area of 3200 square miles...” (Montana Bird Distribution Committee 1996).

A latilong is sufficiently large enough to encompass a wide variety of fish and wildlife habitats, from alpine or subalpine areas above timberline, to mesic montane forests, to rolling foothills and shortgrass prairies, to fields converted for agricultural production, to urban areas, to streams, rivers and lakes. A comparatively small area within the latilong, such as the HGS project vicinity, would not be expected to support all these habitats.

Therefore, the potential species list for the region could be refined to those species that would be expected to occur in the habitats identified during the field reconnaissance.

For the purposes of this report, “suitable habitat” was considered to be any usable habitat for fish; breeding habitat for amphibians; foraging, security and denning habitats for reptiles and mammals; and preferred breeding/nesting habitats for birds. Consequently, some migrant birds may occur seasonally and may have been recorded in the study area even though “suitable habitat” is not present.

During the field reconnaissance, all fish and wildlife species were recorded by the habitat in which they (or their evidence) were observed.

2.3 ENDANGERED, THREATENED OR SPECIES OF CONCERN

The USFWS (letter from Mark Wilson, field supervisor, Ecological Services, Montana Field Office, dated May 12, 2005) indicated that two species that are listed under the Endangered Species Act of 1973, as amended (ESA), could be present in the action area of the HGS project: bald eagle (*Haliaeetus leucocephalus*) and Canada lynx (*Lynx canadensis*). The USFWS also provided a list of Montana species of concern that could occur within a 10-mile radius of the City of Great Falls (i.e., encompassing the area potentially affected by the HGS), derived from Montana Natural Heritage Program (MTNHP) database. MTNHP (2005b) verified this list, which is presented in Table 2-1.

2.4 CONTACTS/LITERATURE REVIEW

Biologists for appropriate wildlife management agencies, including the MDFWP and USFWS, were contacted for information regarding species occurrence and other relevant information. Landowners of the project site were interviewed regarding certain fish and wildlife species. A brief literature review of biological information applicable to the HGS area was also completed.

Table 2-1. Montana species of concern recorded within 10 miles of Great Falls, Montana.^a

Species		Suitable Habitat ^b
Common Name	Scientific Name	
Plants		
Roundleaf water hyssop	<i>Bacopa rotundifolia</i>	Muddy shores of ponds and streams; last recorded in 1891
Many-headed sedge	<i>Carex sychnocephala</i>	Moist meadows; lake shores; thickets at low elevations; last recorded in 1890
Chaffweed	<i>Centunculus minimus</i>	Drying vernal pools; last recorded in 1891
	<i>Entosthodon rubiginosus</i>	Moss; last recorded in 1887
	<i>Funaria americana</i>	Moss; last recorded in 1902
Guadalupe water-nymph	<i>Najas guadalupensis</i>	Submerged in shallow fresh water of oxbow sloughs and ponds; drying vernal pools; last recorded in 1891
Dwarf woolly heads	<i>Psilocarphus brevissimus</i>	Drying vernal pools; last recorded in 1891
California waterwort	<i>Elatine californica</i>	Shallow waters and mudflats along the edges of wetlands; last recorded in 1891
Fish		
Blue sucker	<i>Cycleptus elongatus</i>	Missouri River below Morony Dam
Amphibians		
None		
Reptiles		
Spiny softshell	<i>Apalone spinifera</i>	Missouri River below Morony Dam
Mammals		
None		
Birds		
Ferruginous hawk	<i>Buteo regalis</i>	Sagebrush steppe, grasslands with rolling to steep slopes
Bald eagle	<i>Haliaeetus leucocephalus</i>	Larger rivers, lakes and reservoirs
Burrowing owl	<i>Athene cunicularia</i>	Grasslands with rodent and badger burrows
White-faced ibis	<i>Plegadis chihi</i>	Wetlands
Black-crowned night heron	<i>Nycticorax nycticorax</i>	Wetlands
Franklin's gull	<i>Larus pipixcan</i>	Wetlands
Common tern	<i>Sterna hirundo</i>	Wetlands
Black tern	<i>Chlidonias niger</i>	Wetlands

^aSource: MTNHP (2005b) and USFWS letter dated May 12, 2005.

^bSuitable habitat for animals is defined in Section 2.2.

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Appendix A. Fish and wildlife species potentially occurring in the vicinity of the proposed Highwood Generating Station Project.

Species ^a			Recorded in Project Vicinity ^b	Suitable Habitat in Project Vicinity ^c
FISH				
Acipenseridae				
	Shovelnose sturgeon	<i>Scaphirhynchus platyrhynchus</i>		X
Esocidae				
	Northern pike	<i>Esox lucius</i>		X
Hiodontidae				
	Goldeye	<i>Hiodon alosoides</i>		X
Catostomidae				
	Shorthead redhorse	<i>Moxostoma macrolepidotum</i>		X
	White sucker	<i>Catostomus commersoni</i>	X?	X
	Longnose sucker	<i>Catostomus catostomus</i>		X
	Mountain sucker	<i>Catostomus platyrhynchus</i>		X
	Blue sucker	<i>Cycleptus elongatus</i>		X
	Bigmouth buffalo	<i>Ictiobus cyprinellus</i>		X
	Smallmouth buffalo	<i>Ictiobus bubalus</i>		X
	River carpsucker	<i>Carpiodes carpio</i>		X
Cyprinidae				
	Common carp	<i>Cyprinus carpio</i>	X	X
	Longnose dace	<i>Rhinichthys cataractae</i>		X
	Lake chub	<i>Couesius plumbeus</i>		X
	Flathead chub	<i>Platygobio gracilis</i>		X
	Fathead minnow	<i>Pimephales promelas</i>	X?	X
	Western silvery/plains minnow	<i>Hybognathus argyritis/placitus</i>		X
	Emerald shiner	<i>Notropis atherinodes</i>		X
Salmonidae				
	Rainbow trout	<i>Oncorhynchus mykiss</i>		X
	Brown trout	<i>Salmo trutta</i>		X
	Brook trout	<i>Salvelinus fontinalis</i>		X
	Mountain whitefish	<i>Prosopium williamsoni</i>		X
Ictaluridae				
	Channel catfish	<i>Ictalurus punctatus</i>		X
	Stonecat	<i>Noturus flavus</i>		X
	Burbot	<i>Lota lota</i>		X
Centrarchidae				
	Pumpkinseed	<i>Lepomis gibbosus</i>		X
Sciaenidae				
	Freshwater drum	<i>Aplodnotus grunniens</i>		X
Cottidae				
	Mottled sculpin	<i>Cottus bairdi</i>		X
Percidae				
	Yellow perch	<i>Perca flavescens</i>		X
	Walleye	<i>Stizostedion vitreum</i>		X
	Sauger	<i>Stizostedion canadense</i>		X
AMPHIBIANS				
Caudata				
	Tiger salamander	<i>Ambystoma tigrinum</i>		X
Anura				
	Plains spadefoot	<i>Spea bombifrons</i>		X
	Great Plains toad	<i>Bufo cognatus</i>		X
	Boreal chorus frog	<i>Pseudacris maculata</i>		X

Species ^a			Recorded in Project Vicinity ^b	Suitable Habitat in Project Vicinity ^c
	Northern leopard frog	<i>Rana pipiens</i>		X
REPTILES				
Testudines				
	Painted turtle	<i>Chrysemys picta</i>		X
	Spiny softshell turtle	<i>Apalone spinifera</i>		X
Squamata				
	Greater short-horned lizard	<i>Phrynosoma hernandesi</i>		X
	Rubber boa	<i>Charina bottae</i>		X
	Eastern racer	<i>Coluber constrictor</i>		X
	Western hog-nosed snake	<i>Heterodon nasicus</i>		X
	Gopher snake	<i>Pituophis catenifer</i>	X	X
	Terrestrial gartersnake	<i>Thamnophis elegans</i>		X
	Plains gartersnake	<i>Thamnophis radix</i>		X
	Common gartersnake	<i>Thamnophis sirtalis</i>		X
	Western rattlesnake	<i>Crotalus viridis</i>		X
MAMMALS				
Insectivora				
	Masked (common) shrew	<i>Sorex cinereus</i>		X
	Montane (dusky) shrew	<i>Sorex monticolus</i>		X
	Dwarf shrew	<i>Sorex nanus</i>		X
	Northern water shrew	<i>Sorex palustris</i>		
	Preble's shrew	<i>Sorex preblei</i>		X
Chiroptera ^d				
	Townsend's big-eared bat	<i>Corynorhinus townsendii</i>		X
	Big brown bat	<i>Eptesicus fuscus</i>		X
	Silver-haired bat	<i>Lasionycteris noctivagans</i>		X
	Red bat	<i>Lasiurus borealis</i>		X
	Hoary bat	<i>Lasiurus cinereus</i>		X
	Western small-footed myotis	<i>Myotis ciliolabrum</i>		X
	Long-eared myotis	<i>Myotis evotis</i>		X
	Little brown myotis	<i>Myotis lucifugus</i>		X
	Long-legged myotis	<i>Myotis volans</i>		X
	Yuma myotis	<i>Myotis yumanensis</i>		X
Lagomorpha				
	Pika	<i>Ochotona princeps</i>		
	Snowshoe hare	<i>Lepus americanus</i>		
	White-tailed jackrabbit	<i>Lepus townsendii</i>	X	X
	Desert cottontail	<i>Sylvilagus audubonii</i>	X	X
	Mountain cottontail	<i>Sylvilagus nuttallii</i>		X
Rodentia				
	Beaver	<i>Castor canadensis</i>	X	X
	Porcupine	<i>Erethizon dorsatum</i>	X	X
	Northern pocket gopher	<i>Thomomys talpoides</i>	X	X
	Southern red-backed vole	<i>Clethrionomys gapperi</i>		
	Long-tailed vole	<i>Microtus longicaudus</i>		
	Meadow vole	<i>Microtus pennsylvanicus</i>	X?	X
	Heather vole	<i>Phenacomys intermedius</i>		
	Bushy-tailed woodrat	<i>Neotoma cinerea</i>		X
	Muskrat	<i>Ondatra zibethicus</i>	X	X
	Northern grasshopper mouse	<i>Onychomys leucogaster</i>		X
	Deer mouse	<i>Peromyscus maniculatus</i>	X	X
	House mouse	<i>Mus musculus</i>		X

Species ^a			Recorded in Project Vicinity ^b	Suitable Habitat in Project Vicinity ^c
	Black-tailed prairie dog	<i>Cynomys ludovicianus</i>		
	Yellow-bellied marmot	<i>Marmota flaviventris</i>		X
	Eastern gray squirrel	<i>Sciurus carolinensis</i>		
	Red squirrel	<i>Tamiasciurus hudsonicus</i>		
	Columbian ground squirrel	<i>Spermophilus columbianus</i>		
	Richardson's ground squirrel	<i>Spermophilus richardsonii</i>	X	X
	Thirteen-lined ground squirrel	<i>Spermophilus tridecemlineatus</i>		X
	Yellow-pine chipmunk	<i>Tamias amoenus</i>		
	Least chipmunk	<i>Tamias minimus</i>	X	X
	Western jumping mouse	<i>Zapus princeps</i>		X
Carnivora				
	Coyote	<i>Canis latrans</i>	X	X
	Gray wolf	<i>Canis lupus</i>		
	Red fox	<i>Vulpes vulpes</i>	X	X
	Mountain lion	<i>Puma concolor</i>		X
	Lynx	<i>Lynx canadensis</i>		
	Bobcat	<i>Lynx rufus</i>		X
	Striped skunk	<i>Mephitis mephitis</i>	X	X
	Wolverine	<i>Gulo gulo</i>		
	Northern river otter	<i>Lontra canadensis</i>		X
	Long-tailed weasel	<i>Mustela frenata</i>		X
	Least weasel	<i>Mustela nivalis</i>		X
	Mink	<i>Mustela vison</i>		X
	Badger	<i>Taxidea taxus</i>	X	X
	Raccoon	<i>Procyon lotor</i>	X	X
	Black bear	<i>Ursus americanus</i>		
Artiodactyla				
	Pronghorn	<i>Antilocapra americana</i>		X
	Mountain goat	<i>Oreamnos americanus</i>		
	Bighorn sheep	<i>Ovis canadensis</i>		
	Moose	<i>Alces alces</i>		
	Elk	<i>Cervus elaphus</i>		
	Mule deer	<i>Odocoileus hemionus</i>	X	X
	White-tailed deer	<i>Odocoileus virginianus</i>		X
BIRDS ^e				
Gaviiformes				
	Common loon	<i>Gavia immer</i>	X	
	Yellow-billed loon	<i>Gavia adamsii</i>		
Podicipediformes				
	Eared grebe	<i>Podiceps nigricollis</i>		
	Western grebe	<i>Aechmophorus occidentalis</i>		
Pelecaniformes				
	American white pelican	<i>Pelecanus erythrorhynchos</i>	X	
	Double-crested cormorant	<i>Phalacrocorax auritus</i>	X	
Ciconiiformes				
	Great blue heron	<i>Ardea herodias</i>	X	
Anseriformes				
	Tundra swan	<i>Cygnus columbianus</i>		
	Canada goose	<i>Branta canadensis</i>	X	X
	Wood duck	<i>Aix sponsa</i>		
	Green-winged teal	<i>Anas crecca</i>	X	
	Mallard	<i>Anas platyrhynchos</i>	X	X
	Northern pintail	<i>Anas acuta</i>		

Species ^a			Recorded in Project Vicinity ^b	Suitable Habitat in Project Vicinity ^c
	Blue-winged teal	<i>Anas discors</i>		X
	Cinnamon teal	<i>Anas cyanoptera</i>		
	Northern shoveler	<i>Anas clypeata</i>	X	X
	Gadwall	<i>Anas strepera</i>		X
	American wigeon	<i>Anas americana</i>	X	
	Redhead	<i>Aythya americana</i>		
	Ring-necked duck	<i>Aythya collaris</i>		
	Lesser scaup	<i>Aythya affinis</i>		
	Long-tailed duck	<i>Clangula hyemalis</i>		
	Common goldeneye	<i>Bucephala clangula</i>	X	
	Barrow's goldeneye	<i>Bucephala islandica</i>		
	Bufflehead	<i>Bucephala albeola</i>		
	Common merganser	<i>Mergus merganser</i>	X	X
	Ruddy duck	<i>Oxyura jamaicensis</i>		
Falconiformes				
	Turkey vulture	<i>Carthartes aura</i>		X
	Osprey	<i>Pandion haliaetus</i>		X
	Bald eagle	<i>Haliaeetus leucocephalus</i>	X	X
	Northern harrier	<i>Circus cyaneus</i>		X
	Sharp-shinned hawk	<i>Accipiter striatus</i>		
	Cooper's hawk	<i>Accipiter cooperii</i>		
	Northern goshawk	<i>Accipiter gentilis</i>		
	Swainson's hawk	<i>Buteo swainsoni</i>		X
	Red-tailed hawk	<i>Buteo jamaicensis</i>	X	X
	Ferruginous hawk	<i>Buteo regalis</i>		
	Rough-legged hawk	<i>Buteo lagopus</i>		
	Golden eagle	<i>Aquila chrysaetos</i>		X
	American kestrel	<i>Falco sparverius</i>	X	X
	Merlin	<i>Falco columbarius</i>		
	Peregrine falcon	<i>Falco peregrinus</i>		
	Gyr Falcon	<i>Falco rusticolus</i>		
	Prairie falcon	<i>Falco mexicanus</i>		
Galliformes				
	Gray partridge	<i>Perdix perdix</i>	X	X
	Ring-necked pheasant	<i>Phasianus colchicus</i>	X	X
	Blue grouse	<i>Dendragapus obscurus</i>		
	Ruffed grouse	<i>Bonasa umbellus</i>		
	Sharp-tailed grouse	<i>Tympanuchus phasianellus</i>		X
Gruiformes				
	Sora	<i>Porzana carolina</i>		
	American coot	<i>Fulica americana</i>		
	Sandhill crane	<i>Grus canadensis</i>		
Charadriiformes				
	Killdeer	<i>Charadrius vociferus</i>	X	X
	American avocet	<i>Recurvirostra americana</i>		
	Willet	<i>Catoptrophorus semipalmatus</i>		
	Spotted sandpiper	<i>Actitis macularia</i>		X
	Upland sandpiper	<i>Bartramia longicauda</i>		X
	Long-billed curlew	<i>Numenius americanus</i>	X	X
	Common snipe	<i>Gallinago gallinago</i>	X	X
	Franklin's gull	<i>Larus pipixcan</i>	X	
	Ring-billed gull	<i>Larus delawarensis</i>	X	
	California gull	<i>Larus californicus</i>	X	
	Forster's tern	<i>Sterna forsteri</i>		

Species ^a			Recorded in Project Vicinity ^b	Suitable Habitat in Project Vicinity ^c
Columbiformes				
	Rock dove	<i>Columba livia</i>	X	X
	Mourning dove	<i>Zenaida macroura</i>	X	X
Strigiformes				
	Great horned owl	<i>Bubo virginianus</i>		X
	Northern pygmy-owl	<i>Glaucidium gnoma</i>		
	Short-eared owl	<i>Asio flammeus</i>	X	X
	Northern saw-whet owl	<i>Aegolius acadicus</i>		X
Caprimulgiformes				
	Common nighthawk	<i>Chordeiles minor</i>	X	X
Apodiformes				
	White-throated swift	<i>Aeronautes saxatalis</i>		
	Rufous hummingbird	<i>Selasphorus rufus</i>		
Coraciiformes				
	Belted kingfisher	<i>Ceryle alcyon</i>		X
Piciformes				
	Red-naped sapsucker	<i>Sphyrapicus nuchalis</i>		
	Williamson's sapsucker	<i>Sphyrapicus thyroideus</i>		
	Downy woodpecker	<i>Picoides pubescens</i>		
	Hairy woodpecker	<i>Picoides villosus</i>		
	Three-toed woodpecker	<i>Picoides tridactylus</i>		
	Black-backed woodpecker	<i>Picoides arcticus</i>		
	Northern flicker	<i>Colaptes auratus</i>		X
Passeriformes				
	Olive-sided flycatcher	<i>Contopus borealis</i>		
	Western wood-pewee	<i>Contopus sordidulus</i>		
	Willow flycatcher	<i>Empidonax traillii</i>		X
	Least flycatcher	<i>Empidonax minimus</i>		X
	Hammond's flycatcher	<i>Empidonax hammondi</i>		
	Dusky flycatcher	<i>Empidonax oberholseri</i>		X
	Cordilleran flycatcher	<i>Empidonax occidentalis</i>		
	Western kingbird	<i>Tyrannus verticalis</i>	X	X
	Eastern kingbird	<i>Tyrannus tyrannus</i>	X	X
	Horned lark	<i>Eremophila alpestris</i>	X	X
	Tree swallow	<i>Tachycineta bicolor</i>	X	X
	Violet-green swallow	<i>Tachycineta thalassina</i>		X
	Northern rough-winged swallow	<i>Steigidopteryx serripennis</i>		X
	Bank swallow	<i>Riparia riparia</i>		X
	Cliff swallow	<i>Hirundo pyrrhonota</i>	X	X
	Barn swallow	<i>Hirundo rustica</i>	X	X
	Gray jay	<i>Perisoreus canadensis</i>		
	Steller's jay	<i>Cyanocitta stelleri</i>		
	Blue jay	<i>Cyanocitta cristata</i>		
	Western scrub-jay	<i>Aphelocoma californica</i>		
	Clark's nutcracker	<i>Nucifraga columbiana</i>		
	Black-billed magpie	<i>Pica pica</i>	X	X
	American crow	<i>Corvus brachyrhynchos</i>	X	X
	Common raven	<i>Corvus corax</i>	X	X
	Black-capped chickadee	<i>Parus atricapillus</i>		X
	Mountain chickadee	<i>Parus gambeli</i>		
	Red-breasted nuthatch	<i>Sitta canadensis</i>		
	White-breasted nuthatch	<i>Sitta carolinensis</i>		
	Brown creeper	<i>Certhia americana</i>		
	Rock wren	<i>Salpinctes obsoletus</i>		X

Species ^a			Recorded in Project Vicinity ^b	Suitable Habitat in Project Vicinity ^c
	House wren	<i>Troglodytes aedon</i>	X	X
	American dipper	<i>Cinclus mexicanus</i>		
	Golden-crowned kinglet	<i>Regulus satrapa</i>		
	Ruby-crowned kinglet	<i>Regulus calendula</i>		
	Eastern bluebird	<i>Sialia sialis</i>		
	Mountain bluebird	<i>Siala currucoides</i>	X	X
	Townsend's solitaire	<i>Myadestes townsendi</i>		
	Veery	<i>Catharus fuscescens</i>		
	Swainson's thrush	<i>Catharus ustulatus</i>		
	Hermit thrush	<i>Catharus guttatus</i>		
	American robin	<i>Turdus migratorius</i>	X	X
	Varied thrush	<i>Ixoreus naevius</i>		
	Gray catbird	<i>Dumetella carolinensis</i>		X
	American pipit	<i>Anthus rubescens</i>		
	Sprague's pipit	<i>Anthus spragueii</i>		
	Bohemian waxwing	<i>Bombycilla garrulus</i>		
	Cedar waxwing	<i>Bombycilla cedrorum</i>		
	Northern shrike	<i>Lanius excubitor</i>		
	European starling	<i>Sturnus vulgaris</i>	X	X
	Solitary vireo	<i>Vireo solitarius</i>		
	Warbling vireo	<i>Vireo gilvus</i>		
	Red-eyed vireo	<i>Vireo olivaceus</i>		
	Orange-crowned warbler	<i>Vermivora celata</i>		
	Yellow warbler	<i>Dendroica petechia</i>	X	X
	Yellow-rumped warbler	<i>Dendroica coronata</i>		
	Townsend's warbler	<i>Dendroica townsendi</i>		
	American redstart	<i>Setophaga ruticilla</i>		
	Ovenbird	<i>Seiurus aurocapillus</i>		
	MacGillivray's warbler	<i>Oporornis tolmiei</i>		
	Common yellowthroat	<i>Geothlypis trichas</i>	X	X
	Yellow-breasted chat	<i>Icteria virens</i>		X
	Western tanager	<i>Piranga ludoviciana</i>		
	Rose-breasted grosbeak	<i>Pheucticus ludovicianus</i>		
	Black-headed grosbeak	<i>Pheucticus melanocephalus</i>		
	Lazuli bunting	<i>Passerina amoena</i>		X
	Spotted towhee	<i>Pipilo maculatus</i>	X	X
	American tree sparrow	<i>Spizella arborea</i>		
	Chipping sparrow	<i>Spizella passerina</i>		
	Clay-colored sparrow	<i>Spizella pallida</i>	X	X
	Brewer's sparrow	<i>Spizella breweri</i>		
	Field sparrow	<i>Spizella pusilla</i>		
	Vesper sparrow	<i>Poocetes gramineus</i>	X	X
	Lark sparrow	<i>Chondestes grammacus</i>		X
	Black-throated sparrow	<i>Amphispiza bilineata</i>		
	Lark bunting	<i>Calamospiza melanocorys</i>		
	Savannah sparrow	<i>Passerculus sandwichensis</i>	X	X
	Song sparrow	<i>Melospiza melodia</i>		
	Lincoln's sparrow	<i>Melospiza lincolni</i>		
	White-crowned sparrow	<i>Zonotrichia leucophrys</i>		
	Harris' sparrow	<i>Zonotrichia querula</i>		
	Dark-eyed junco	<i>Junco hyemalis</i>		
	Lapland longspur	<i>Calcarius lapponicus</i>		
	Snow bunting	<i>Plectrophenax nivalis</i>		
	Bobolink	<i>Dolichonyx oryzivorus</i>		X

Species ^a			Recorded in Project Vicinity ^b	Suitable Habitat in Project Vicinity ^c
	Red-winged blackbird	<i>Agelaius phoeniceus</i>	X	X
	Western meadowlark	<i>Sturnella neglecta</i>	X	X
	Yellow-headed blackbird	<i>Xanthocephalus xanthocephalus</i>		
	Brewer's blackbird	<i>Euphagus cyanocephalus</i>	X	X
	Common grackle	<i>Quiscalus quiscula</i>	X	X
	Brown-headed cowbird	<i>Molothrus ater</i>	X	X
	Northern oriole	<i>Icterus bullockii</i>		X
	Gray-crowned rosy-finch	<i>Leucosticte tephrocotis</i>		
	Pine grosbeak	<i>Pinicola enucleator</i>		
	Cassin's finch	<i>Carpodacus cassinii</i>		
	House finch	<i>Carpodacus mexicanus</i>		X
	Red crossbill	<i>Loxia curvirostra</i>		
	Pine siskin	<i>Carduelis pinus</i>		
	American goldfinch	<i>Carduelis tristis</i>	X	X
	Evening grosbeak	<i>Coccothraustes vespertinus</i>		
	House sparrow	<i>Passer domesticus</i>	X	X

^aDistribution and nomenclature according to Holton and Johnson (2003), Werner *et al.* (2004), Foresman (2001), Montana Bird Distribution Committee (1996), Montana Natural Heritage Program (2005a).

^bCurrent study.

^cHabitat availability according to Hart *et al.* (1998). For the purposes of this report, "suitable habitat" = breeding habitat for amphibians; foraging, security and denning habitats for reptiles and mammals; and preferred breeding/nesting habitats for birds. Consequently, some migrant birds may occur seasonally, and may have been recorded in the study area even though "suitable habitat" is not present.

^dBecause of their considerable mobility, "suitable habitat" for bats (Chiroptera) included foraging habitat even if roosting habitat was not available.

^eProject region for birds = latilong 17, quarter-latilong D and latilong 18, quarter-latilong C (Montana Bird Distribution Committee 1996, Montana Natural Heritage Program 2005a).